No.



9600193

# THE UNITED STATES OF AMERICA

TO ALE TO WHOM THESE; PRESENTS; SHALL, COME;

Aobartis Seeds, Inc.

INCCORP. THERE HAS BEEN PRESENTED TO THE

#### Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS OM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, ON DITTIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN THE ATTENT PROVIDED BY THE PLANT VARIETY ON ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'S08-80'

In Vestimonn Morrest, I have hereunto set my hand and caused the seal of the Hunt Anciety Protection Office to be affixed at the City of Washington, D.C. this thirty-first day of March, in the year of our Lord two thousand.

Allast:

Aun marie Ho.

Commissioner
Plant Variety Protection Office
Aminuthum Machatina Samin

Agriculture

REPRODUCE LOCALLY. Include form number and date on a  U.S. DEPARTMENT OF AGRICULTURE  AGRICULTURAL MARKETING SERVICE	FORM APPROVED - OMB NO. 0581-			
SCIENCE DIVISION - PLANT VARIETY PROTECTION OF	1974 (5 U.S.C. 552a).			
APPLICATION FOR PLANT VARIETY PROTECTION  (Instructions and information collection burden statem)	Application is required in order to determine if a plant variety prote certificate is to be issued (7 U.S.C. 2421). Information is held confidential certificate is issued (7 U.S.C. 2426).			
NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME	
Northrup King Co.		S 08-80		
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Coul	ntry	TELEPHONE (include area code)	FOR OFFICIAL USE ONLY	
P. O. Box 949 Washington, Iowa 52353-0949	in the second of the second o	319-653-6645	9600193	
		6. FAX (include area code)	F DATE	
Attention: Dr. John C. Thorne	•	319-653-4609	I They say	
7. GENUS AND SPECIES NAME	8. FAMILY NAME (Botan	cal)	FILING AND EXAMINATION FEE:	
Glycine max	Leguminosae		F \$ 2450 CD F DATE	
Soybean			R 1900 19 1996	
D. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZA  Northrup King Co.	TION (corporation, partnersh	ip, association, etc.) (Common name)	CERTIFICATION FEE	
<ol> <li>If incorporated, give state of incorporation</li> <li>Delaware</li> </ol>		12. DATE OF INCORPORATION 1976	E DATE 11 28-17	
P. O. Box 949 Washington, Iowa 52353-0949			16. FAX (include area code)	
. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow in	nstructions on reverse)			
a. X Exhibit A. Origin and Brooding History of the Variety b. X Exhibit B. Statement of Distinctness				
c. X Exhibit C. Objective Description of the Variety				
d.  Exhibit D. Additional Description of the Variety				
e. X Exhibit E. Statement of the Basis of the Applicant's Ownership				
f. X Voucher Sample (2,500 viable untreated seeds or, for tuber propagates g. X Filing and Examination Fee (\$2,450), made payable to Tressurer of the			ed in a public repository)	
DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY	VARIETY NAME ONLY, AS A  NO (If "no," go t		on 83(a) of the Plant Variety Protection Activ	
DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED A GENERATIONS?  YES NO	AS TO NUMBER OF 19.	IF "YES" TO ITEM 18, WHICH CLASSES	OF PRODUCTION BEYOND BREEDER SEED	
HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN REL	EASED, USED, OFFERED FO	R SALE, OR MARKETED IN THE U.S. OR C	. —	
The applicant(s) declare that a viable sample of basic seed of the variety will be	furnished with application ar	d will be replenished upon request in acco	rdance with such regulations as may be	
applicable, or for a tuber propagated variety a tissue culture will be deposited in.  The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or Section 41, and is entitled to protection under the provisions of Section 42 of the	n a public repository and main	ntained for the duration of the certificate.		
Applicant(s) islare) informed that false representation herein can jeopardize prote		•		
NATURE OF APPLICANT (OWNERS) ( )		E OF APPLICANT (Owner(s))		
ME (Pifese print or type)  Dr. John C. Thorne	NAME (Pla	ase print or type/		
PACITY OR TITLE DATE	CAPACITY	00 777 5	DATE	

Soybean Research Director

DATE

CAPACITY OR TITLE

DATE

#### **EXHIBIT A**

### Origin and Breeding History of the Variety

The soybean variety 'S 08-80' is derived from a single F6 plant from the cross 'S 07-80' x 'S 19-90'. The cross was made in the summer of 1988 at the Northrup King Research Center at Washington, Iowa. The F1 and F2 generations were grown at the Northrup King Research Center at Waimea, Kauai, Hawaii, in the winter of 1988-89; the F3 at the Northrup King Research Center at London, Ontario, in the summer of 1989; the F4 and F5 at Waimea in the winter of 1989-90, and the F6 at London in the summer of 1990. The F1 was bulk harvested. The F2 through F5 were advanced by harvesting 2-4 seeds per plant and planting 600 seed from the resulting bulk. In the fall of 1990, individual plants were harvested and threshed. The progeny from each of these plants were planted in a preliminary yield trial at London in 1991. One of these, numbered C342602 was selected based on yield and agronomic characteristics for further testing. This line was subsequently tested under the temporary designation X9508 and named S 08-80. It has been tested at several northern combelt locations in the U.S. and in Ontario from 1992 through 1995 and found to yield well compared to other late Group 0 varieties. Descriptive characteristics including purple flowers, tawny pubescence, tan pods, and yellow hilum (may contain up to 2% other hilum) have been identified and confirmed. S 08-80 has been tested in the field for iron deficiency chlorosis and found to be moderately resistant. It has been tested for reaction to Races 1, 3, 4, 7, and 17 of Phytophthora sojae using hypocotyl inoculation of greenhouse grown plants and found to carry the Rps1-c gene for resistance.

In the winter of 1992-93, 200 seeds of S 08-80 were planted at Waimea. The increase was rogued for flower and pubescence color and 100 single plants were harvested and threshed individually. The progeny from these plants were planted at London in the summer of 1993. This increase was carefully rogued at flowering and maturity. Uniform rows which conformed to the variety description were bulked to produce Pedigree Seed. This seed was planted near Washington, IA in 1994 to produce Breeder Seed. The increase block was rogued carefully during flowering and at maturity and found to be uniform.

Foundation Seed of S 08-80 was produced in 1995 from the 1994 Breeder Seed. The Iowa Crop Improvement Association inspected the fields and found them to meet the standards for Foundation Seed.

S 08-80 is stable and uniform within a purity level of 99%. Over four years of testing and three cycles of seed increase, we have observed no variants. Hilum color is yellow, but as with other tawny pubescent varieties of this genotype, the hilum may under some environmental conditions exhibit a very light buff color. Any off-type plants removed from increase fields were assumed to have arisen from admixture or outcrossing. Varietal purity will be maintained using progeny rows as described previously as needed for the life of the variety.

### **EXHIBIT B**

## **Novelty Statement for the Variety**

S 08-80 is most similar to S 07-80. It can be differentiated from S 07-80 on the basis of resistance to Races 1, 3, and 7 of Phytophthora sojae. S 08-80 is resistant to these races; S 07-80 is susceptible. S 08-80 can be further differentiated from S 07-80 on the basis of hilum color. Seeds of S 08-80 have yellow hila; seeds of S 07-80 have brown hila.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE LIVESTOCK, MEAT, GRAIN & SEED DIVISION PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MARYLAND 20705

EXHIBIT C (Soybean)

# OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (Glycine max 1...)

30 / BE	AN (GIYCINE MAX L.)	
NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Northrup King Co.	X9508(C342602)	S 08-80
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Coo	le)	FOR OFFICIAL USE ONLY
510 N. 12th Ave.		PVPO NUMBER
P. 0. Box 949		9600193
Washington, Iowa 52353-0949	1 1	
Choose the appropriate response which characterizes the va- in your answer is fewer than the number of boxes provided,	place a zero in the first box w	when number is 9 or less (e.g., 0 9).
1. SEED SHAPE:	) (	
	T	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1. 11	(L/W ratio > 1.2; L/T ratio = < 1.2)
1 = Spherical (L/W, L/T, and T/W ratios = < 1.2) 3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)		(L/T ratio > 1.2; T/W > 1.2)
2. SEED COAT COLOR: (Mature Seed)		
1 1 = Yellow 2 = Green 3 = Brown	4 = Black 5 = Other	(Specify)
3. SEED COAT LUSTER: (Mature Hand Shelled Seed)		
1 = Duli ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebs	oy'; 'Gasoy 17')	
4. SEED SIZE: (Mature Seed)		
	•	
1 5 Grams per 100 seeds		·
5. HILUM COLOR: (Mature Seed)		
7 4 . 3. 4 . 2 . Yello	4 = Gray 5 = Imperfect Bi.	ack 5 = Black 7 = Other (Specify)
2 1 = Buff 2 = Yellow 3 = Brown (May show slight buff color in some enviror	,	- Jack Jack , Street Jopes , ,
6. COTYLEDON COLOR: (Mature Seed)	ilicitus/	
1 1 = Yellow 2 = Green		
7. SEED PROTEIN PEROXIDASE ACTIVITY:		
2 1 = Low 2 = High		
2 1 2 2 7 1 9 1		
8. SEED PROTEIN ELECTROPHORETIC BAND:	·	
1 = Type A (SP1 <sup>8</sup> ) 2 = Type B (SP1 <sup>b</sup> )		
9. HYPOCOTYL COLOR:		
1 = Green only ('Evans'; 'Davis') 2 = Green wi 3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71' 4 = Dark Purple extending to unifoliate leaves ('Hodgson'		('Woodworth'; 'Tracy')
10. LEAFLET SHAPE:		
3 1 = Lanceolate 2 = Oval 3 = Ovate	4 = Other (Specify)	
		9600197
FORM LMGS-470-57 (2-82)	No. of the Control of	Page 1 of 4

The second secon	
11. LEAFLET SIZE:	
1 = Small ('Amsoy 71'; 'A5312')	2 = Medium ('Corsoy 79'; 'Gasoy 17')
2 3 = Large ('Crawford'; 'Tracy')	RECEIVED
	USDA-AMS-PVPD
12. LEAF COLOR:	
1 = Light Green ('Weber'; 'York')	2 = Medium Green ('Corsoy 79'; 'Braxton') 96 MAR 19 A10 :07
2 3 = Dark Green ('Gnome'; 'Tracy')	96 MAR 19 A10:07
13. FLOWER COLOR:	
2 1 = White 2 = Purple	3 = White with purple throat
2 = Purple	3 - White With Policie thioat
14. POD COLOR:	
1 1 = Tan 2 = Brown	3 = Black
15. PLANT PUBESCENCE COLOR:	
2 1 = Gray 2 = Brown (Tawny)	
16. PLANT TYPES:	
1 = Siender ('Essex'; 'Amsoy 71') 3 = Rushy ('Gnome': 'Gnome')	2 = Intermediate ('Amcor'; 'Braxton')
3 = Bushy ('Gnome'; 'Govan')	
17. PLANT HABIT:	
1 = Determinate ('Gnome'; 'Braxton') 3 = Indeterminate ('Nebroy'; 'Improved Bell	2 = Semi-Determinate ('Will')
3 = Indeterminate ('Nebsoy'; 'Improved Peli	can*)
18. MATURITY GROUP:	
1=000 2=00 3=0	4 = I 5 = II 6 = III 7 = IV 8 = V
10 = VII 11 = VIII	12 = IX 13 = X
19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = St	usceptible; 2 = Resistant)
BACTERIAL DISEASES:	
0 Bacterial Pustule (Xanthomonas phaseoli var	tolensie!
	. 20,11010)
Bacterial Blight (Pseudomonas glycinea)	
0 Wildfire (Pseudomonas tabaci)	
FUNGAL DISEASES:	
	9600103
1 Brown Spot (Septoria glycines)	
Frogeye Leaf Spot (Cercospora sojina)	
0 Race 1 0 Race 2 0 Race	
nace 1 1 nace 2 1 nace 2	e 3  O Race 4  O Race 5  Other (Specify)
Target Spot (Corynespora cassiicola)	
2 Downy Mildew (Peronospora trifoliorum var.	manshurica)
Pourdant Mildour (Mirrosopheara diffusa)	
Powdery Mildew (Microsphaera diffusa)	
Brown Stem Rot (Cephalosporium gregatum)	$\frac{1}{N} = \frac{N}{N} \left( \frac{N}{N} + \frac{N}{N} \right)^{\frac{N}{N}} \left( \frac{N}{N} + \frac{N}{N} + \frac{N}{N} \right)^{\frac{N}{N}} \left( \frac{N}{N} + \frac{N}{N} + \frac{N}{N} + \frac{N}{N} \right)^{\frac{N}{N}} \left( \frac{N}{N} + \frac{N}{N}$
O Stem Canker (Diaporthe phaseolorum var. cau	llivora)

19.	DISEA	SE REACTION	: (Enter 0 = Not Tested; 1 = Susceptible; 2 = F	Resistant) (Continued)			
	FUN	IGAL DISEASE	S: (Continued)				
•	1	Pod and Sten	n Blight <i>(Diaporthe phaseolorum</i> var; sojae)				
	1	Purple Seed S	tain (Cercospora kikuchii)	•			
	0	Rhizoctonia i	Root Rot (Rhizoctonia solani)				
		Phytophthora	a Rot (Phytophthora megasperma var. sojae)	•			
	2	Race 1	2 Race 2 2 Race 3 1	Race 4 0 Race 5	0 Race 6 2 Race 7		
	0	Race 8	0 Race 9 Other (Specify)	Rps 1-c			
;	VIRA	AL DISEASES:					
	0	Bud Blight (T	obacco Ringspot Virus)				
			c (Bean Yellow Mosaic Virus)				
			ic (Cowpea Chlorotic Virus)				
			lean Pod Mottle Virus)				
	0	Seed Mottle (	Soybean Mosaic Virus)				
	NEM	ATODE DISEA	SES:	•			
		Soybean Cyst	Nematode (Heterodera glycines)				
	1	Race 1	1 Race 2 1 Race 3 1	Race 4 Other (S	Specify)		
	0	Lance Nemato	ode (Hoplolaimus Colombus)				
	0	Southern Roo	t Knot Nematode (Meloidogyne incognita)	•			
	0	Northern Roo	t Knot Nematode (Meloidogyne Hapla)				
	0	Peanut Root k	Cnot Nematode (Meloidogyne arenaria)				
		Reniform Nen	natode (Rotylenchulus reniformis)				
		OTHER DISE	ASE NOT ON FORM (Specify):				
			,				
0. 1	HYSIO	LOGICAL RES	SPONSES: (Enter 0 = Not Tested; 1 = Suscepti	ible; 2 = Resistant)			
	2	Iron Chlorosis	on Calcareous Soil Moderately	resistant			
Other (Specify)							
1. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)							
	0		Beetle (Epilachna varivestis)				
-			opper (Empoasca fabae)				
	一		/	•			
				· · · · · · · · · · · · · · · · · · ·			
2. 1			RIETY MOST CLOSELY RESEMBLES THAT	SUBMITTED.			
CHARACTER NAME OF VARIETY		CHARACTER	NAME OF VARIETY				
	lant Sha	·	Lambert	Seed Coat Luster	S 19-90		
	eaf Shar	· · · · · · · · · · · · · · · · · · ·	\$ 07-80	Seed Size	\$ 19-90		
Leaf Color § 07-80 Seed Shape S 19-90  Leaf Size Lambert Seedling Pigmentation S 19-90							
_		-	Lambert	Seedling Pigmentation	S 19-90		

## 23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100	NO.
				CM Width	CM Length	% Protein	% Oil	SEEDS	SEEDS/ POD
Submitted	125	2.9	85	6.8	9.5	42.2	20.3	JSDA-AMS-F	
S 07-80 Name of Similar Variety	123	3.3	84	7.3	10.2	40.9	21.2	96 MAR 19 A	0:07

### PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

- 1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
- 2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
- 3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A2 in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
- 4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE	The following statements are made in accordance with the Privacy Act 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.					
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to determine if a plant variety protectic certificate is to be issued (7 U.S.C. 2421). Information is held confident until certificate is issued (7 U.S.C. 2426).					
1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME				
Novartis Seeds, Inc.		S08-80				
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code)				
P.O. Box 959	512-593-7333	612-593-6501				
Minneapolis, MN 55440	7. PVPO NUMBER					
8. Does the applicant own all rights to the variety? Mark an "X" in approp	riate block. If no, please explain.	YES NO				
		e e e				
9. Is the applicant (individual or company) a U.S. national or U.S. based of If no, give name of country	and the first of the agency and					
10. Is the applicant the original owner?	NO If no, please answer one of the	following: District Colon (District Colon )				
a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?  NO  If no, give name of country  b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?  YES  NO  If no, give name of country						
The state of the s	cnacal:					
11. Additional explanation on ownership (if needed, use reverse for extra	space).					
		·				
1895 - Ann	न्द्रांद्राते, केंगर	A.				
PLEASE NOTE:						
Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:						
1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.						
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.						
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.						
The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.						
According to the Paperwork Reduction Act of 1995, no persons are required to respond to a co this information collection is 0581-0055. The time required to compete this information colle- searching existing data sources, gathering and maintaining the data needed, and completing an	ction is estimated to average 10 minutes per respondence of reviewing the collection of information.	Size, areas and the second of				
The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis (Not all prohibited bases apply to all programs). Persons with disabilities who require alternationally USDA's TARGET Center at 202-720-2600 (voice and TDD).	of race, color, national origin, sex, religion, age, disa we means for communication of program information	bility, political beliefs, and marital or familial status. (braille, large print, audiotape, etc.) should contact				